

REMARKS

Claims 1-29 and 39-46 are all the claims pending in the application. Claims 30-38 have been withdrawn from consideration as being drawn to a non-elected invention. By this Amendment, Applicant cancels the non-elected claims 30-38. In addition, Applicant amends claims 1, 39, and 41 to further clarify the invention.

Summary of the Office Action

Applicant thanks the Examiner for withdrawing previous rejections. The Examiner, however, found new grounds for rejecting the claims. Claims 1-29 and 39-46 are rejected under 35 U.S.C. § 103(a).

Claim Rejections

In particular, claims 1, 2, 6, 28, 29, 39, and 40 are rejected under 35 U.S.C. § 103(a) as being obvious over newly found references U.S. Patent No. 6,556,963 to Tetzlaff (hereinafter “Tetzlaff”) and an article titled “Matching Input Mode to the Task” to Rudnický (hereinafter “Rudnický”), claims 3-5 as being unpatentable over Tetzlaff and Rudnický in view of U.S. Patent No. 5,500,920 to Kupiec (hereinafter “Kupiec”), claims 7-9 as being unpatentable over Tetzlaff in view of Rudnický and U.S. Patent No. 6,138,100 to Dutton et al. (hereinafter “Dutton”), claims 10, 12, 14, 19, and 20 as being unpatentable over Tetzlaff and Rudnický in view of U.S. Patent No. 5,638,425 to Meador III et al. (hereinafter “Meador”), claim 11 as being unpatentable over Tetzlaff, Rudnický, and Meador in view of Kupiec, claim 13 as being unpatentable over Tetzlaff, Rudnický, and Meador in view of U.S. Patent No. 6,240,448 to Imielinski et al. (hereinafter “Imielinski”), claims 15 and 16 as being unpatentable over Tetzlaff

and Rudnický in view of U.S. Patent No. 6,581,055 to Ziauddin et al. (hereinafter “Ziauddin”), claim 17 as being unpatentable over Tetzlaff, Rudnický, and Ziauddin in view of U.S. Patent No. 5,625,748 to McDonough et al (hereinafter “McDonough”), claim 18 as being unpatentable over Tetzlaff, Rudnický, and Ziauddin in view of Meador, claim 21 as being unpatentable over Tetzlaff and Rudnický in view of Kupiec, claims 22 and 24 as being unpatentable over Tetzlaff, Rudnický, and Meador in view of U.S. Patent No. 4,612,416 to Emerson et al. (hereinafter “Emerson”), claim 23 as being unpatentable over Tetzlaff, Rudnický, and Meador in view of Dutton, claims 25-27 as being unpatentable over Tetzlaff and Rudnický in view of Admitted Prior Art (hereinafter “APA”), claims 30-33 as being unpatentable over Meador in view of the APA, claims 34-38 as being unpatentable over Meador and APA in view of Anderson, claims 41-45 as being unpatentable over Kupiec in view of U.S. Patent No. 6,701,162 to Everett (hereinafter “Everett”) and claim 46 as being unpatentable over Kupiec and Everett in view of Meador.

Applicant respectfully traverses these rejections in view of the following comments.

A. *Claims 1-29*

Of these rejected claims, only claim 1 is independent. In particular, independent claim 1 is unpatentable over Tetzlaff in view of Rudnický and its dependent claims 2-29 are unpatentable by various combinations of these *two primary references* and *another eight references*. Since claim 1 is the only independent claim out of this group of claims, the other rejected claims being dependent, this response focuses initially on claim 1.

Claim 1, among a number of unique features not taught by the prior art references cited by the Examiner, recites:

an automatic question unit operable to determine whether a user is connected via a voice-based or a text-based communication link, and for eliciting input from a user in accordance with said determination...

a query formulation unit...for prompting said automatic question unit to elicit from the user additional input related to formulating the search query...

The Examiner now alleges that Tetzlaff teaches that output should be appropriate with the input and that Rudnický teaches in accordance with the appropriate determination, *i.e.*, to alternate between speech and text input (see page 5 of the Office Action). In addition, the Examiner alleges that Tetzlaff's teaching of prompting the user to add the unrecognized food is equivalent to eliciting additional input from the user (see page 6 of the Office Action). Applicant respectfully disagrees for the reasons detailed below.

Turning to the cited art, Tetzlaff teaches a natural language user interface for inputting information to a nutrient analysis system that integrates nutritional guidelines from diverse sources. A user of the system describes elements of a meal that she has either eaten or is considering eating, and the system responds with dynamic, personalized, state-sensitive feedback about the nutrient components of her choices in relation to her personal nutritional objectives. Tetzlaff teaches using appropriate input and output devices, such as a keyboard, mouse, and/or microphone. The user may inform the system of his or her choices using either spoken or written natural language (*see* Abstract; col. 2, lines 1 to 8; col.3, lines 28 to 40).

In particular, Tetzlaff teaches retrieving user input and making sure that the components of the user input are understood. This is done using standard system I/O and the word recognizer. User input is in the form of natural language, *e.g.*, in a form of one food (an egg) or a list of foods (two slices of bacon and an egg). Each food is decompressed into a computable form by parsing the input against a language model. If the food does not appear in the language model, then the user is consulted to determine whether or not the unrecognized food should be added to the language model. If the user does not want to add the item or phrase to the language model, then a new input is solicited (Fig. 6; col. 6, lines 24 to 43).

That is, in Tetzlaff, if input is not recognized, the user is prompted to add this unrecognized input to the language model. If the user does not want to add the unrecognized item, new input is solicited. In other words, Tetzlaff fails to teach or suggest prompting the question unit to elicit from the user additional input related to formulating the search query. In Tetzlaff, if the food is not recognized, it can only be added.

Moreover, Tetzlaff teaches that when a word is not valid, presenting the user with a list of alternatives (Fig. 10, col. 8, lines 4 to 12). That is, the list of possible words are presented on the screen and the user selects one of the possible alternative valid words. In Tetzlaff, however, when the user selects an alternative word, this alternative word will be used for searching the database, and the original word will be discarded. In other words, Tetzlaff fails to teach or suggest additional input for formulating the search query. Tetzlaff teaches only an alternative to the original input and not supplementing the original input with additional information.

In short, in Tetzlaff, there is no teaching or suggestion that addition input for formulating the search query is requested from the user. In Tetzlaff, only one search is performed based on inputted word or an alternative selected word. There is no additional input for formulating the search query.

Furthermore, Tetzlaff teaches that user input is obtained from the devices connected via the system bus to a computer system such as a PC (Fig. 1; col. 2, line 65 to col. 3, line 28). Alternatively, Tetzlaff teaches that meal elements may be uploaded from another computer or personal data assistant (col. 3, lines 39 to 40). Uploading information from another computer, however, is not similar to eliciting a remote user input. That is, in Tetzlaff, the information is simply forwarded or the input devices are physically connected to the computer system that interfaces with the user. In other words, Tetzlaff fails to teach or suggest an interface for remote user input. In Tetzlaff, the computer system does not receive remote input but rather input via devices physically connected to the computer system, *e. g.*, a microphone, a keyboard, a mouse and so on (col. 3, lines 33 to 38). In short, Tetzlaff does not teach eliciting remote input from the user.

Moreover, as acknowledged by the Examiner, Tetzlaff fails to teach or suggest eliciting input from a user in accordance with the determination, as set forth in claim 1 (*see* page 5 of the Office Action). The Examiner, however, alleges that Rudnicky cures the deficient teachings of Tetzlaff (*Id.*).

MPEP § 2143.01 states that in determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain *whether or not the reference*

teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Rudnický is not an enabling publication. Rudnický lacks any reference to technical implementations, and is not sufficient to stand for the alleged proposition of discriminating between text and speech. In general, Rudnický discusses various input modes available and their relationships to tasks user wants to perform. For example, Rudnický mentions that most applications combine keyboard and pointer input (see ¶ 2 on page 100). Moreover, Rudnický teaches that new input modes such as speech or stylus allow for a better fit between the mode and user activity (see ¶ 3 on page 100). Rudnický's article, however, is related to matching input modes with tasks. It does not teach or suggest how to integrate these various modes or how to implement even the dual mode systems. That is, Rudnický's article only matches activity with the mode (as the name suggests) and fails to suggest any technical implementation of the modes.

Moreover, claim 1 recites: "an automatic question unit operable to determine whether a user is connected via a voice-based or a text-based communication link, and for eliciting remote input from a user in accordance with said determination." Rudnický only teaches to match input with an activity. It fails to teach or suggest having a system communicate with the user in accordance with the determined communication link. That is, Rudnický is focused on user input and not on the system eliciting input from the user in accordance with the determined mode. In short, Rudnický fails to teach or suggest eliciting input in accordance with the determination.

With respect to Rudnicky, to somehow meet the unique claim element of “eliciting input in accordance with the determination”, the Examiner seems to rely on page 102, 2nd and 3rd paragraphs, which is an article by Crane and Rittschev, which begins on page 100 (hereinafter “Crane”) (see page 5 of the Office Action). Crane is no more relevant or enabling than Rudnicky. Crane’s article discusses the benefits of integrating writing and speech (page 100, ¶ 1, page 102). Then, the article acknowledges the challenges in simultaneously using more than one input mode, *e.g.*, using pen and voice input concurrently. Further, Crane predicts that various modes will be integrated in the future and finishes with a discussion about benefits of the integration. Not only does Crane lack any enablement with respect to simultaneous multimodality but it acknowledges that it is not yet created (page 102, ¶¶ 3 and 4). Clearly, then, Crane does not cure the deficiencies of Tetzlaff.

Therefore, “an automatic question unit operable to determine whether a user is connected via a voice-based or a text-based communication link, and for eliciting remote input from a user in accordance with said determination...and a query formulation unit, coupled to said speech and data units, and operable both for formulating the searchable query from a recognized input by at least one of said speech and data recognition units, and for prompting said automatic question unit to elicit from the user additional input related to formulating the searchable query,” as recited in claim 1 is not taught or suggested by the combined teachings of Tetzlaff and Rudnicky.

The combined teachings of Tetzlaff and Rudnicky lacks eliciting remote input from a user in accordance with the determination and prompting the automatic question unit to elicit from the user additional input related to formulating the search query. For at least these

exemplary reasons, Tetzlaff and Rudnický, taken alone or in any conceivable combination, clearly cannot render the present invention as recited in claim 1 obvious. Thus, Applicant respectfully submits that claim 1 is allowable, and respectfully requests that the Examiner withdraw the § 103(a) rejection of claim 1. In addition, claims 2, 6, 28, and 29 are patentable at least by virtue of their dependency on claim 1.

The other dependent claims 3-5 and 7-27 are allegedly unpatentable in view of various combinations of these *two primary references* and *another eight references*. Applicant respectfully submits that these eight references, (Kupiec, Dutton, Meador, Imielinski, Ziauddin, McDonough, Emerson, and APA), taken alone or in any conceivable combinations, fail to cure the deficient teachings of Tetzlaff and Rudnický.

Moreover, with respect to the dependent claims 3-5, the Examiner alleges that one of ordinary skill in the art would have been motivated to combine Kupiec with the device/method of Tetzlaff and/or Rudnický to improve recognition by taking advantage of the observation that the intended words in a user's question are usually semantically related to each other (*see* page 9 of the Office Action). Applicant respectfully disagrees.

Applicant respectfully submits that one of ordinary skill in the art would not have combined Kupiec for the reason suggested by the Examiner. In Tetzlaff, the user has to follow a language model, *i.e.*, quantity, size modifier, unit, food modifier, food (col. 4, lines 1 to 46). That is, in Tetzlaff, user input follows a strict language model, hence the semantics of Kupiec is of no use to Tetzlaff's system. In Tetzlaff, the food elements must be entered in accordance with the language model. Using the semantics to interpret input, on the other hand, may be helpful

when the user enters a question but not when user input is predefined based on a strict language model. In short, one of ordinary skill in the art would not have been motivated to combine the three references, Tetzlaff and Rudnicky with Kupiec for the reason suggested by the Examiner. In fact, there is no motivation to combine these three unrelated references. For at least this additional reason, Applicant respectfully submits that dependent claims 3-5 are patentable over the combined teachings of Tetzlaff, Rudnicky, and Kupiec.

Moreover with respect to dependent claims 12 and 14, one of ordinary skill in the art would not have been motivated to combine Tetzlaff, Rudnicky, and Meador, for the reasons suggested by the Examiner. The Examiner alleges that to distinguish between similar items, it would make sense to have a contact point for each searchable entry (last name, street number, etc...), (*see* page 13 of the Office Action).

Applicant respectfully points out that Tetzlaff addresses a nutrient analysis system. In other words, in Tetzlaff, the user is queried to enter a food element or elements that the user ate or is about to eat. Meador, on the other hand, relates to an automated directory by inputting a location and name (*see Abstract*). If as alleged by the Examiner, the location and names are the contact points then clearly location will not help distinguish between food items. In other words, one of ordinary skill in the art would not have been motivated to apply the teachings of Meador to the combined teachings of Tetzlaff and Rudnicky in the manner alleged by the Examiner. Also, Applicant respectfully submits that one of ordinary skill in the art would not have turned to a directory assistance system in designing a food nutrient system. In short, Tetzlaff and Meador address different problems and are in different fields of endeavor. One of ordinary skill in the art

would not have combined Meador with Tetzlaff and Rudnický. For at least these additional reasons, Applicant respectfully submits that claims 12 and 14 are patentable over the combined teachings of Tetzlaff, Rudnický, and Meador.

Furthermore, with respect to claims 15 and 16, there is no motivation to combine Tetzlaff, Rudnický, and Ziauddin in the manner suggested by the Examiner. In particular, the Examiner alleges that one of ordinary skill in the art would have been motivated to combine the references to make the user effort be proportional to the number of query results (*see* page 16 of the Office Action). In Tetzlaff, the user effort is proportional to the query results. That is, depending on the meal size (one item v. ten items), nutrient information is displayed. Hence, Examiner's proposed suggestion for combining the references is inapplicable.

In addition, Tetzlaff teaches a nutrient analysis system, which is based on receiving user's meal, and if user input cannot be recognized, presenting the user with a selection. That is, in Tetzlaff, there is no teaching or suggestion of using questions or using more than one question. One of ordinary skill in the art would not have been motivated to use questions of Ziauddin with the system of Tetzlaff. In Tetzlaff, the user only inputs food, and if the food cannot be recognized, the user is asked to add the food to the database, or is simply queried for new input. One of ordinary skill in the art would not have been motivated to combine Tetzlaff's system with a system of Ziauddin, which is related to optimizing query. For at least this additional reason, Applicant respectfully submits that claims 15 and 16 are clearly patentable over the combined teachings of Tetzlaff, Rudnický, and Ziauddin.

Finally, with respect to claims 25-27, the Examiner's motivation for combining Tetzlaff, Rudnick, and APA is not understood. Tetzlaff is a nutrient analysis system, which has nothing to do with "a location". In particular, why would a nutrient analysis system, which provides nutritional guidelines to the user about food items provide the user with a location? The relationship between location and nutrient system is not understood.

Applicant respectfully notes that *most if not all inventions arise from a combination of old elements*. *In re Kotzab*, 55 USPQ2d at 1316 (citing *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998)). Thus, every element of a claimed invention may often be found in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *Id.* Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. *In re Kotzab*, 55 USPQ2d at 1316 (citing *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); and *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)).

Applicant respectfully submits that Tetzlaff and the APA references address different problems (nutrient system v. location) and are completely unrelated references. Tetzlaff, as detailed above, is a nutrient analysis system. The APA, on the other hand, only teaches a conventional GPS system. There is no motivation to combine a nutrient system with a conventional GPS unless in an attempt to somehow meet the language of claims 25-27. For at

least these additional reasons, Applicant respectfully submits that claims 25-27 are patentable over the combined teachings of Tetzlaff, Rudnicky, and the APA.

B. Claims 30-38

In view of the Restriction Requirement, Applicant cancels claims 30-38. Therefore, the rejections with respect to these claims are rendered moot.

C. Claims 39 and 40

The Examiner rejected claims 39 and 40 under 35 U.S.C. § 103(a) as being unpatentable over Tetzlaff in view of Rudnicky. Independent claim 39 recites similar features to the features recited in claim 1. Since claim 39 contains features that are similar to the features argued above with respect to claim 1, those arguments are respectfully submitted to apply with equal force here. For at least substantially the same exemplary reasons, therefore, Applicant respectfully requests the Examiner to withdraw this rejection of independent claim 39. Claim 40 is patentable at least by virtue of its dependency on claim 39.

D. Claims 41-46

Claims 41-45 are rejected under 35 U.S.C. § 103(a) as being obvious over Kupiec in view of Everett and claim 46 as being obvious over Kupiec and Everett in view of Meador. Applicant respectfully traverses these rejections in view of the following remarks. Since claim 41 is the only independent claim, the other rejected claims being dependent, this response focuses initially on claim 41.

Independent claim 41, as now amended, among a number of unique features not taught by the prior art references cited by the Examiner, recites:

wherein when said query items are
insufficient to form said query for
interrogating said database, receiving
additional instructions in said
communication mode for entering additional
query items to supplement the search query.

The Examiner acknowledges that Kupiec does not teach or suggest querying the user for additional information (page 27 of the Office Action). The Examiner, however, now alleges that Everett cures the deficient teachings of Kupiec. In particular, the Examiner alleges that asking the user to reenter the word when it is not found in the dictionary is equivalent to entering additional query items (see page 27 of the Office Action). Applicant respectfully disagrees.

Similar to Tetzlaff discussed above, in Everett, the user is only asked to reenter unrecognized word (Figs. 4 and 5; col. 4, lines 1 to 38). That is, Everett fails to teach or suggest supplementing the search query with additional query items when satisfactory results cannot be performed based on the already entered items. In other words, Everett only teaches replacing the original input with a restated word (new input) and fails to teach or suggest additional query items to supplement the search query.

Therefore, “wherein when said query items are insufficient to form said query for interrogating said database, receiving additional instructions in said communication mode for entering additional query items to supplement the search query,” as set forth in claim 41 is not suggested or taught by the combined teachings of Kupiec and Everett, which lack receiving additional instruction for entering additional query items to supplement the query. For at least

these exemplary reasons, Applicant respectfully submits that independent claim 41 is patentable over the combined teachings of Kupiec and Everett. Applicant, therefore, respectfully requests the Examiner to reconsider and withdraw this rejection of independent claim 41. Also, Applicant respectfully submits that claims 42-45 are allowable at least by virtue of their dependency on claim 41.

Claim 46 is rejected under 35 U.S.C. § 103(a), as being unpatentable over Kupiec and Everett in view of Meador. Applicant respectfully traverses this rejection with respect to the dependent upon claim 41, claim 46. Applicant has already demonstrated that Kupiec and Everett do not meet all the requirements of independent claim 41. Meador is cited only for teaching interrogating a database using a name. As such, Meador clearly fails to cure the deficient teachings of Kupiec and Everett. Therefore, Applicant respectfully requests the Examiner to withdraw this rejection of claim 46, which depends upon claim 41.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

Amendment under 37 C.F.R. § 1.111
U.S. Application No. 09/820,865

Attorney Docket No. Q62688

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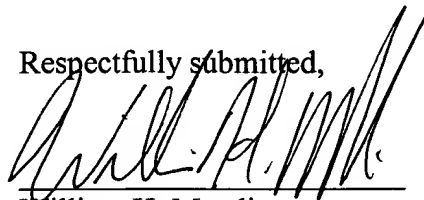
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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'William H. Mandir', written over a horizontal line.

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Date: January 19, 2005